

## REMARKS

Claims 1-14 are all the claims pending in the application.

### **I. Claim Rejections under 35 U.S.C. § 103(a)**

Claims 1-6 and 12-14 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Yamamoto et al. (Adaptive internally turbo-coded ultra wideband-impulse radio) in view of Bar-Ness (US 2005/0201446).

Claim 1, as amended, recites that weighting is performed such that, for each of the encoded bits, a number of repetitive pulses allotted to the encoded bit is based on the susceptibility of the encoded bit to an adverse effect including interference from another user.

Applicant respectfully submits that Yamamoto and Bar-Ness do not teach or suggest at least the above-noted feature recited in amended claim 1.

Regarding the Bar-Ness reference, Applicant notes that this reference discloses a system in which a transmitted signal is modulated using an optimal number of pulses per bit,  $N_s^{opt}$ , by utilizing a dynamic adaption technique that is shown in Figs. 5 and 6 of Bar-Ness (see lines 1-4 of paragraph [0055]). In this regard, as explained in Bar-Ness, the adaption technique utilizes channel state information to adapt  $N_s^{opt}$ , wherein the channel state information is estimated as the average signal-to-noise ratio (SNR) per pulse transmitted (see lines 4-8 of paragraph [0055]).

Taking the above-noted description of Bar-Ness into account, as well as the above-noted language recited in claim 1, Applicant notes that while Bar-Ness may disclose the ability to change the number of pulses per bit based on the susceptibility of the bit to an adverse effect caused by noise (i.e., based on the signal-to-noise ratio), that Bar-Ness does not disclose or

suggest that the number of pulses per bit is changed based on the susceptibility of the bit to an adverse effect including interference from another user.

In view of the foregoing, Applicant respectfully submits that Bar-Ness does not disclose, suggest or otherwise render obvious the above-noted feature recited in amended claim 1 which sets forth that weighting is performed such that, for each of the encoded bits, a number of repetitive pulses allotted to the encoded bit is based on the susceptibility of the encoded bit to an adverse effect including interference from another user.

Further, Applicant respectfully submits that the above-noted feature recited in amended claim 1 would not have been obvious based on a combination of Yamamoto and Bar-Ness.

Accordingly, Applicant respectfully submits that the combination of Yamamoto and Bar-Ness does not teach, suggest or otherwise render obvious all of the features recited in amended claim 1. Thus, Applicant submits that claim 1 is patentable over the cited prior art, an indication of which is kindly requested.

Regarding claims 2, 3 and 12-14, Applicant notes that each of these claims has been amended in a similar manner as claim 1 so as to recite that weighting is performed such that, for each of the encoded bits, a number of repetitive pulses allotted to the encoded bit is based on the susceptibility of the encoded bit to an adverse effect including interference from another user.

For at least similar reasons as discussed above with respect to claim 1, Applicant respectfully submits that Yamamoto and Bar-Ness do not teach, suggest or otherwise render obvious the above-noted feature recited in claims 2, 3 and 12-14. Accordingly, Applicant submits that claims 2, 3 and 12-14 are patentable over the cited prior art, an indication of which is kindly requested.

Regarding claims 4-6, Applicant notes that these claims depend from claim 3 and are therefore patentable at least by virtue of their dependency.

## **II. Allowable Subject Matter**

Applicant acknowledges that claims 7-11 have been indicated in the Office Action as containing allowable subject matter, and that such claims would be allowable if rewritten in independent form.

## **III. Conclusion**

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may best be resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

Respectfully submitted,

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